

In the Claims:

Please amend claims 1, 3-6, 9, 12, 14, 18, 19, 21, 23, 26, 27, 30, 32-34, 37, 38, 41, 44, 46, 47, 50, 51 and 55-57 as follows:

1. (Currently Amended) An apparatus for supporting a microelectronic substrate, comprising:

a support member ~~substrate~~ having a support ~~first~~ surface configured to carry a microelectronic substrate and a second surface facing opposite from the first surface;

a first connection structure ~~carried by~~ disposed on the second surface of the support member ~~substrate~~ and configured to remain decoupled from a microelectronic substrate when the support member ~~substrate~~ carries the microelectronic substrate, the first connection structure having a first bond site configured to receive a flowable conductive material, the first connection structure further having a first number of first elongated members connected to and extending outwardly from the first bond site, wherein none of the first elongated members is configured to be electrically connected to the microelectronic substrate; and

a second connection structure ~~carried by~~ disposed on the second surface of the support member ~~substrate~~, the second connection structure having a second bond site configured to receive a flowable conductive material, the second connection structure being configured to be coupled to the microelectronic substrate when the support member ~~substrate~~ carries the microelectronic substrate, the second connection structure further having a second number of second elongated members extending outwardly from the second bond site, the second number being the same as the first number.

2. (Original) The apparatus of claim 1 wherein each of the first elongated members is configured to receive at least a portion of the flowable conductive material and wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material.

3. (Currently Amended) The apparatus of claim 1, further comprising a layer disposed on the first and second elongated members and attached to the support memberssubstrate, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein a covered portion of each first and second elongated members extends between the layer and the support memberssubstrate, and an exposed portion of each elongated member is exposed through one of the first and second apertures, further wherein each exposed portion has approximately the same length.

4. (Currently Amended) The apparatus of claim 1, further comprising a layer disposed on the first and second elongated members and attached to the support memberssubstrate, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein the layer covers junctions between the first bond site and the first elongated members, and covers junctions between the second bond site and the second elongated members.

5. (Currently Amended) The apparatus of claim 1 wherein the first bond site includes a solder pad having a diameter of about 330 microns and wherein at least one of the first elongated members has a length of about 250 microns, further wherein the apparatus further comprises a solder mask disposed over the first and second elongated members and attached to the support memberssubstrate, the solder mask having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein a covered portion of the at least one first elongated member extends beneath the solder mask for a distance of about 200 microns.

6. (Currently Amended) The apparatus of claim 1 wherein the second connection structure has a third bond site configured to be wire bonded to the microelectronic substrate when the microelectronic substrate is carried by the support

membersubstrate, and wherein at least one of the second elongated members extends between the second and third bond sites.

7. (Original) The apparatus of claim 1 wherein the first and second elongated members are configured to be wetted by the flowable conductive material when the flowable conductive material is disposed on the first bond site and placed in a flowable state.

8. (Original) The apparatus of claim 1 wherein the first conductive structure includes two first elongated members extending away from opposite sides of the first bond site

9. (Currently Amended) The apparatus of claim 1, further comprising a layer disposed on the first and second elongated members and attached to the support membersubstrate, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site.

10 (Original) The apparatus of claim 1 wherein the first connection structure includes at least one electrically conductive metallic material.

11 (Original) The apparatus of claim 1 wherein one of the first elongated members is shorter than another of the first elongated members.

12 (Currently Amended) The apparatus of claim 1 wherein at least one of the elongated members is temporarily coupled to a plating bus to provide electrical current to the first connection structure during formation of the support membersubstrate.

13. (Original) The apparatus of claim 1 wherein the first bond site includes a solder ball pad, and wherein the apparatus further comprises a solder ball disposed on the solder ball pad.

14. (Currently Amended) The apparatus of claim 1, further comprising:
a first solder ball disposed on the first bond site and having a first size and shape;

a second solder ball disposed on the second bond site and having a second size at least approximately the same as the first size, and a second shape at least approximately the same as the first shape; and

a microelectronic substrate carried by the support member substrate, the microelectronic substrate being electrically coupled to the second connection structure and being electrically isolated from the first connection structure.

15. (Original) The apparatus of claim 1 wherein the first connection structure and the second connection structure each have two elongated members.

16. (Withdrawn)

17. (Withdrawn)

18. (Currently Amended) The apparatus of claim 1 wherein each of the first and second elongated members has an axis along which the member is elongated and wherein each member has a width transverse to the axis, further wherein the widths of all the elongated members on the support member substrate are approximately equal.

19. (Currently Amended) The apparatus of claim 1 ~~wherein the support member has a first surface that includes the support surface, the support member further having a second surface facing opposite from the first surface, the first and~~

~~second connection structures being disposed on the second surface, and wherein the support member substrate includes a slot extending between the first and second surfaces, the slot being positioned to receive wires extending between the second connection structure and the microelectronic substrate when the support member substrate carries the microelectronic substrate.~~

20. (Original) The apparatus of claim 1, further comprising:

a first solder ball disposed on the first bond site and projecting away from the first bond site by a first distance; and

a second solder ball disposed on the second bond site and projecting away from the second bond site by a second distance at least approximately the same as the first distance.

21. (Currently Amended) An apparatus for supporting a microelectronic substrate, comprising:

a support member ~~substrate~~ having a support ~~first~~ surface configured to carry a microelectronic substrate and a second surface facing opposite from the first surface;

a first bond site ~~carried by~~ disposed on the second surface of the support member ~~substrate~~ and configured to remain decoupled from a microelectronic substrate when the support member ~~substrate~~ carries the microelectronic substrate;

first elongated members connected to and extending outwardly from the first bond site;

a first portion of a flowable conductive material disposed on the first bond site, the first portion of the flowable conductive material projecting from the first bond site in a direction generally normal to the first bond site by a first distance;

a second bond site ~~carried by~~ disposed on the second surface of the support member ~~substrate~~ and configured to be electrically coupled to the

microelectronic substrate when the support member substrate carries the microelectronic substrate;

second elongated members extending outwardly from the second bond site; and
a second portion of a flowable conductive material disposed on the second bond site, the second portion of the flowable conductive material projecting from the second bond site in a direction generally normal to the second bond site by a second distance at least approximately equal to the first distance.

22. (Original) The apparatus of claim 21 wherein the first bond site has a total of a first number of first elongated members and the second bond site has a total of a second number of second elongated members, and wherein the first number is the same as the second number.

23. (Currently Amended) The apparatus of claim 21, further comprising a third bond site configured to be wire bonded to the microelectronic substrate when the microelectronic substrate is carried by the support member substrate, and wherein at least one of the second elongated members extends between the second and third bond sites.

24. (Original) The apparatus of claim 21 wherein at least part of the first portion of the flowable conductive material extends along the first elongated members, and wherein at least part of the second portion of the flowable conductive material extends along the second elongated members.

25. (Original) The apparatus of claim 21 wherein the first elongated members include two first elongated members extending away from opposite sides of the first bond site.

26. (Currently Amended) The apparatus of claim 21, further comprising a layer disposed on the first and second elongated members and attached to the support members substrate, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site.

27. (Currently Amended) The apparatus of claim 21, further comprising a layer disposed on the first and second elongated members and attached to the support members substrate, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein a covered portion of each first and second elongated member extends between the layer and the support members substrate, and an exposed portion of each elongated member is exposed through one of the first and second apertures, further wherein each exposed portion has approximately the same length.

28. (Original) The apparatus of claim 21 wherein the first elongated members include at least one electrically conductive metallic material.

29. (Original) The apparatus of claim 21 wherein the first bond site includes a solder ball pad, and wherein the flowable conductive material includes a solder ball disposed on the solder ball pad.

30. (Currently Amended) The apparatus of claim 21, further comprising:
a first solder ball disposed on the first bond site;
a second solder ball disposed on the second bond site; and
a microelectronic substrate carried by the support members substrate, the microelectronic substrate being electrically coupled to the second bond site and being electrically isolated from the first bond site.

31. (Withdrawn)

32. (Currently Amended) An apparatus for supporting a microelectronic substrate, comprising:

a support member ~~substrate~~ having a support ~~first~~ surface configured to carry a microelectronic substrate and a second surface facing opposite from the first surface;

a first connection structure ~~carried by~~ disposed on the second surface of the support member ~~substrate~~ and having a first bond site configured to receive a flowable conductive material and remain electrically isolated from a microelectronic substrate when the microelectronic substrate is carried by the support ~~members~~ substrate, the first connection structure further having at least two first elongated members connected to and extending outwardly from the first bond site, wherein each of the first elongated members is configured to receive at least a portion of the flowable conductive material; and

a plurality of second connection structures ~~carried by~~ disposed on the second surface of the support ~~members~~ substrate, each second connection structure having a second bond site configured to receive a flowable conductive material, each second connection structure being configured to be electrically coupled to the microelectronic substrate when the support member ~~substrate~~ carries the microelectronic substrate, each second connection structure still further having at least two second elongated members extending outwardly from the second bond site, wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material from the second bond site, further wherein none of the second connection structures are coupled to any first connection structures of the support ~~members~~ substrate.

33. (Currently Amended) The apparatus of claim 32 wherein all of the first and second connection structures of the support ~~member~~substrate have the same number of elongated members.

34. (Currently Amended) The apparatus of claim 32 wherein each second connection structure has a third bond site configured to be wire bonded to the microelectronic substrate when the microelectronic substrate is carried by the support ~~members~~substrate, and wherein and at least one of the second elongated members of each second connection structure extends between the second and third bond sites of that second connection structure.

35 (Original) The apparatus of claim 32 wherein the first and second elongated members are configured to be wetted by the flowable conductive material when the flowable conductive material is disposed on the first bond site and placed in a flowable state.

36 (Original) The apparatus of claim 32 wherein the first conductive structure includes two first elongated members extending away from opposite sides of the first bond site.

37 (Currently Amended) The apparatus of claim 32, further comprising a layer disposed on the first and second elongated members and attached to the support ~~members~~substrate, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site.

38 (Currently Amended) The apparatus of claim 32, further comprising a layer disposed on the first and second elongated members and attached to the support ~~members~~substrate, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein a covered portion of each first and second elongated member extends between the layer and the support

membersubstrate, and an exposed portion of each elongated member is exposed through one of the first and second apertures, further wherein each exposed portion has approximately the same length.

39. (Original) The apparatus of claim 32 wherein the first connection structure includes at least one electrically conductive metallic material.

40. (Original) The apparatus of claim 32 wherein the first bond site includes a solder ball pad, and wherein the apparatus further comprises a solder ball disposed on the solder ball pad.

41. (Currently Amended) The apparatus of claim 32, further comprising:
a first solder ball disposed on the first bond site;
a second solder ball disposed on the second bond site of each second connection structure; and
a microelectronic substrate carried by the support membersubstrate, the microelectronic substrate being electrically coupled to the second connection structures and being electrically isolated from the first connection structure.

42. (Withdrawn)

43. (Original) The apparatus of claim 32, further comprising:
a first solder ball disposed on the first bond site and projecting away from the first bond site by a first distance; and
a second solder ball disposed on the second bond site and projecting away from the second bond site by a second distance at least approximately the same as the first distance.

44. (Currently Amended) A microelectronic assembly, comprising:
a microelectronic substrate;
a support member substrate having a first surface carrying the microelectronic
substrate and a second surface facing opposite from the first surface; and
a connection structure ~~carried by~~ disposed on the second surface of the support
members substrate, the connection structure having a bond site configured
to receive a flowable conductive material, the connection structure further
having at least two elongated members connected to and extending
outwardly from the bond site with none of the elongated members being
electrically coupled to the microelectronic substrate.

45. (Original) The assembly of claim 44 wherein each elongated member is
configured to receive at least a portion of the flowable conductive material from the
bond site.

46. (Currently Amended) The assembly of claim 44 wherein the connection
structure is a first connection structure and the elongated members are first elongated
members configured to receive at least a portion of a flowable conductive material from
the first bond site, and wherein the apparatus further comprises a second connection
structure carried by the support ~~members~~ substrate, the second connection structure
having a second bond site configured to receive a flowable conductive material, the
second connection structure being electrically coupled to the microelectronic substrate
and having second elongated members extending outwardly from the second bond site,
wherein each of the second elongated members is configured to receive at least a
portion of the flowable conductive material from the second bond site.

47. (Currently Amended) The assembly of claim 44 wherein the connection
structure is a first connection structure and the elongated members are first elongated
members, and wherein the apparatus further comprises a second connection structure
carried by the support ~~members~~ substrate, the second connection structure having a

second bond site configured to receive a flowable conductive material, the second connection structure having a third bond site electrically coupled to the microelectronic substrate, the second connection structure further having second elongated members extending outwardly from the second bond site, wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material from the second bond site, and wherein at least one of the second elongated members extends between the second and third bond sites.

48. (Original) The assembly of claim 44 wherein the elongated members are configured to be wetted by the flowable conductive material when the flowable conductive material is in a flowable state.

49. (Original) The assembly of claim 44 wherein the conductive structure includes exactly two elongated members extending away from opposite sides of the bond site.

50. (Currently Amended) The assembly of claim 44, further comprising a layer disposed on the elongated members and attached to the support members~~substrate~~, the layer having an aperture aligned with the bond site.

51. (Currently Amended) The assembly of claim 44, further comprising a layer disposed on the elongated members and attached to the support members~~substrate~~, the layer having an aperture aligned with the bond site, and wherein a covered portion of each elongated member extends between the layer and the support members~~substrate~~, and an exposed portion of each elongated member is exposed through the aperture, further wherein each exposed portion has approximately the same length.

52. (Original) The assembly of claim 44 wherein the connection structure includes at least one electrically conductive metallic material.

53. (Original) The assembly of claim 44 wherein the bond site includes a solder ball pad, and wherein the apparatus further comprises a solder ball disposed on the solder ball pad.

54. (Withdrawn)

55. (Currently Amended) The apparatus of claim 44 ~~wherein the support member has a first surface that includes the support surface, the support member further having a second surface facing opposite from the first surface, the connection structure being disposed on the second surface, and wherein the support member~~ substrate includes a slot extending between the first and second surfaces, and wherein the apparatus further comprises wires extending through the slot between the second connection structure and the microelectronic substrate.

56. (Currently Amended) The apparatus of claim 44 wherein the connection structure is a first connection structure and the elongated members are first elongated members configured to receive at least a portion of a flowable material from the first bond site, and wherein the apparatus further comprises a second connection structure carried by the support members substrate, the second connection structure having a second bond site configured to receive a flowable conductive material, the second connection structure being electrically coupled to the microelectronic substrate and having second elongated members extending outwardly from the second bond site, wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material from the second bond site, and wherein the apparatus further comprises:

- a first solder ball disposed on the first bond site and projecting away from the first bond site by a first distance; and
- a second solder ball disposed on the second bond site and projecting away from the second bond site by a second distance at least approximately the same as the first distance.

57. (Currently Amended) A microelectronic assembly, comprising:

a microelectronic substrate;

a support member ~~substrate~~ having a first surface carrying the microelectronic substrate and a second surface facing opposite from the first surface;

an inactive connection structure ~~carried by~~ disposed on the second surface of the support member ~~substrate~~, the inactive connection structure having a first bond pad in contact with a first solder ball, the inactive connection structure further having at least two first elongated conductive members, each of which extends outwardly from the first bond pad and neither of which is electrically coupled to the microelectronic substrate, the first conductive members each contacting at least a portion of the first solder ball;

an active connection structure ~~carried by~~ disposed on the second surface of the support member ~~substrate~~, the active connection structure having a second bond pad in contact with a second solder ball, the active connection structure further having a third bond pad configured to receive a wire bond, the active connection structure still further having at least two second elongated conductive members each extending outwardly from the second bond pad, wherein at least one of the second conductive members extends between the second bond pad and the third bond pad, and wherein each of the second conductive members contacts at least a portion of the second solder ball;

a wire bond connected between the microelectronic substrate and the third bond pad; and

a solder mask disposed on the active and inactive connection structures, the solder mask having a first aperture aligned with the first bond pad and a second aperture aligned with the second bond pad.

58. (Original) The assembly of claim 57 wherein the first bond pad has a diameter of about 330 microns and wherein each of the first conductive members has a

length of about 250 microns or more, further wherein a covered portion of each of the first conductive members extends beneath the solder mask for a distance of about 200 microns.

59. (Original) The assembly of claim 57 wherein the inactive connection structure and the active connection structure each have the same number of conductive members.

60. (Withdrawn)

61. (Original) The assembly of claim 57, further comprising:
a first solder ball disposed on the first bond site and projecting away from the first bond site by a first distance; and
a second solder ball disposed on the second bond site and projecting away from the second bond site by a second distance at least approximately the same as the first distance.

62-87. (Withdrawn)

88-123. (Cancelled)